

IN THE CLAIMS:

1. (currently amended) Apparatus for applying a plastic edge strip[[(28)]] on an edge of a plate-like workpiece[[(16)]], such like a wooden board, a chip or particle board, a board of wood-like particles or the like, comprising:
extrusion means[[(18)]] for extruding a strand of plastic material[[(20)]] on an edge[[(14)]] of the workpiece[[(16)]];
forming means[[(24)]] for forming the extruded strand of plastic material[[(20)]] in a desired profile
comprising at least one rotatable roller having a circumferential profile substantially corresponding with the desired profile of the strand of plastic material applied on the edge of the workpiece;
the desired profile of the strand of plastic material is provided by the extruded strand being squeezed between the forming means and the edge of the workpiece.
2. (currently amended) Apparatus according to claim 1, characterized in that the apparatus further comprises transporting means[[(36)]] for transporting the workpiece[[(16)]] past the extrusion means[[(18)]].
3. (currently amended) Apparatus according to claim 1, characterized in that it comprises a stationary support means[[(52)]] for supporting the workpiece[[(16)]]; a clamping means[[(54)]] for clamping the workpiece[[(16)]] to the support means; and a movable member[[(58)]] on which the extrusion means[[(18)]] and the forming means (24.1, 24.2) are transportable along the edge to which the strip is to be applied.
4. (currently amended) Apparatus according to claim 1, characterized in that the apparatus further comprises at least one pressure means[[(34)]] to urge the workpiece[[(16)]] against the forming means[[(24)]].
5. canceled

6. (canceled)
7. (currently amended) Apparatus according to claim 1, characterized in that the apparatus further comprises application means[[(42)]] for applying an adhesive to the edge[[(14)]] of the workpiece [[(16)]] to be covered by the strand of plastic material[[(20)]], wherein the application means[[(42)]] are arranged ~~in front up~~ stream of the position at which the strand of plastic material[[(20)]] is applied on the edge[[(14)]] of the workpiece[[(16)]].
8. (currently amended) Apparatus according to claim 1, characterized in that the apparatus further comprises cooling means[[(46)]] for cooling the strand of plastic material[[(20)]] applied on the edge[[(14)]] of the workpiece[[(16)]].
9. (currently amended) Apparatus according to claim 1, characterized in that the apparatus further comprises supply means[[(50)]] for supplying a decorative layer[[(48)]] on the strand of plastic material[[(20)]] provided on the edge[[(16)]] of the workpiece[[(16)]].
10. (currently amended) Apparatus according to claim 6, characterized in that the cooling means[[(46)]] is arranged at a position in which the decorative layer[[(48)]] is already applied on the strand of plastic material[[(20)]].
11. (currently amended) Apparatus according to claim [[1]] 2, further comprising a ~~characterized in that the~~ transporting means ~~comprises~~ comprised of at least one pair of driven wheels[[(36)]] arranged such that the workpiece[[(16)]] is clamped between the wheels.
12. (withdrawn) Method for applying a plastic edge strip (28) on an edge of a plate-like workpiece (16), such like a wooden board, a chip or particle board, a board of wood-

like particles or the like, characterized in that the method comprises the following steps:

extruding a strand of plastic material (20) on an edge (14) of the workpiece (16), and forming the extruded strand of plastic material (20) in a desired profile.

13. (withdrawn) Method according to claim 12, characterized in that during the method step of extruding the strand of plastic material (20) on the edge (14) of the workpiece (16), the workpiece (16) is transported past an extrusion means for extruding the strand of plastic material (20).

14. (withdrawn) Method according to claim 12, characterized in that during the method step of extruding the strand of plastic material (20) on the edge (14) of the workpiece (16), the workpiece (16) is stationary held and an extrusion means for extruding the strand of plastic material (20) is moved along the edge (14) of the workpiece (16).

15. (withdrawn) Method according to claim 12, characterized in that the strand of plastic material (20) is formed by forming means comprising at least one rotatable roller (24) having a circumferential profile substantially corresponding with the desired profile of the strand of plastic material (20) applied on the edge (14) of the workpiece (16).

16. (withdrawn) Method according to claim 12, characterized in that the strand of plastic material (20) is formed by forming means comprising several rotatable rollers (24) arranged successively, the rollers (24) having different circumferential profiles such that the rollers (24) altogether form the strand of plastic material (20) applied on the edge (14) of the workpiece (16) in the desired profile.

17. (withdrawn) Method according to claim 12, characterized in that an adhesive is applied to the edge (14) of the workspace (16) before the strand of plastic material (20) is applied on the edge (14) of the workpiece (16).

18. (withdrawn) Method according to claim 12, characterized in that the strand of plastic material (20) applied on the edge (14) of the workpiece (16) and formed in the desired profile is cooled by cooling means (46).
19. (withdrawn) Method according to claim 12, characterized in that a decorative layer (48) is applied on the strand of plastic material (20) already extruded on the edge (14) of the workpiece (16).
20. (withdrawn) Method according to claim 19, characterized in that the decorative layer is a foil (48).
21. (withdrawn) Plate-like workpiece, manufactured by means of an apparatus according to claim 1, wherein on an edge (14) of the workpiece (16) a strand of plastic material (20) is extruded, formed in a desired profile, and hardened, the formed strand of plastic material (20) being fixedly joint with said edge (14).
22. (withdrawn) Plate-like workpiece, wherein on an edge (14) of the workpiece (16) a strand of plastic material (20) is extruded, formed in a desired profile, and hardened, the formed strand of plastic material (20) being fixedly joint with said edge (14).
23. (withdrawn) Plate-like workpiece, manufactured by the method according to claim 12, wherein on an edge (14) of the workpiece (16) a strand of plastic material (20) is extruded, formed in a desired profile, and hardened, the formed strand of plastic material (20) being fixedly joint with said edge (14).

REMARKS

Claims 1 – 11 are presented for reconsideration and further examination in view of the foregoing amendments and following remarks.

Initially, it is noted that the Examiner did not refer to claim 23 in the restriction requirement. Applicant assumes that the Examiner would include claim 23 with the claims of group II as claim 23 is drawn to a method. Therefore, as with the other claims of group II, claim 23 is likewise not elected with traverse and withdrawn from consideration.

In the outstanding Office Action, the Examiner issued a restriction requirement; rejected claims 8 and 11 under 35 U.S.C. 112, second paragraph as being indefinite; objected to claim 10; rejected claims 1, 2, 5, 8 and 11 under 35 U.S.C. 102(b) as being anticipated by U.S. patent no. 3,239,402 to Ecklund; rejected claims 1, 5, and 9 as being anticipated by U.S. patent no. 4,597,821 to Munro; rejected claims 1, 2, 5 and 7 as being anticipated by U.S. patent no. 5,693,174 to Nakata et al.; rejected claims 3 and 4 under 35 U.S.C. 103(a) as being unpatentable over Munro; and rejected claim 6 as being unpatentable over Munro in view of German published patent application DE 29817408U1 to Dorus.

By this Response and Amendment:

in response to the restriction requirement, Applicant elected to prosecute group I (claims 1 – 11) and traverse the restriction requirement with respect to groups II (claims 12 – 21[, and 23]) and III (claim 22);

claim 1 has been amended to recite the limitation of dependent claim 5 and to recite the further limitation that the desired profile of the extruded strand is provided by squeezing the strand between the edge of the workpiece and the forming means after extrusion, thereby obviating the rejections of claims 1 – 9 and 11;

the objection to claim 10 has been rendered moot due to the Examiner having found the preliminary amendment previously filed;

claims 5 and 6 have been canceled; and

claims 7 and 11 have been amended to obviate the Examiner's rejection under 35 U.S.C. 112, second paragraph.

It is respectfully submitted that the above amendments do not introduce any new matter to this application within the meaning of 35 U.S.C. 132, or any narrowing of any element of the claims. Support for the amendments to claim 1 of the present application is found in original claim 5 and also in page 3, first paragraph of the specification. Support for the amendment to claim 7 of the application is found in Figure 1 of the specification.

Election/Restriction Requirement

The Examiner stated that the present invention is drawn to three separate inventions. Claims 1 – 11 are drawn to one invention; claims 12 – 21[, and 23] are drawn to a second invention; and claim 22 is drawn to a third invention.

Response

1. Groups I and II

In a telephone conversation conducted on May 29, 2003, Applicant provisionally indicated an intention to elect and prosecute the invention of group 1 (claims 1 – 11) and traverse the restriction requirement as to group II (claims 12 – 21[, and 23]) and group III (claim 22). By this Response and Amendment, Applicant hereby affirms that election with traverse.

The Examiner argues that the inventions of group I and group II are not the same invention because the apparatus as claimed in group I can perform a different method than the

method claimed in group II. Claim 1 is the only independent claim of group I and recites a “forming means” for forming the extruded strand of plastic material in a desired profile.

Amended independent claim 1 further recites that “the desired profile of the strand of plastic material is provided by the extruded strand being squeezed between the forming means and the edge of the workpiece.”

Claim 12 is the only independent claim of group II and recites a method for extruding a plastic material onto an edge of a workpiece in a “desired profile.” This is the only method that the apparatus of claim 1 can perform. Claim 1 recites extruding a plastic material on an edge of a workpiece and forming the plastic material in a desired profile as recited in claim 12.

The Examiner states that the apparatus of claim 1 can perform other methods than that recited in claim 12 in that it can be used to apply a plastic strip to the center of a planar workpiece. However, amended independent claim 1 recites that the plastic material is squeezed between an “edge” of the workpiece and the “forming means.” Applying the plastic strip to the center on a planar surface does not allow for the squeezing of the plastic strip between the edge of the workpiece and the forming means and prevents the formation of the “desired profile” as claimed in amended independent claim 12. Therefore, the apparatus recited in amended independent claim 1 can perform no other method without performing the method recited in independent claim 12. Similarly, as claims 2 – 11 depend from claim 1, they contain all of the respective limitations thereof, and can only perform the method as recited in claim 12. Therefore, the Examiner’s restriction requirement should be reconsidered and withdrawn.

2. Groups I and III

The Examiner further argues that the apparatus of group I can produce a product other

than that recited in claim 22 (group III). Amended claim 1, the only independent claim of group I recites a “forming means” for forming the extruded strand of plastic material in a desired profile.

Amended independent claim 1 further recites that “the desired profile of the strand of plastic material is provided by the extruded strand being squeezed between the forming means and the edge of the workpiece.” Claim 22, the only claim of group III recites a plate-like workpiece having a strand of plastic material extruded on an edge of a workpiece and having a “desired profile.”

The Examiner states that the product can be made using a different apparatus “such as cutting it to shape and applying it to the workpiece. However, the Examiner’s method does not meet the limitation of claim 22. The Examiner’s method implies that the extrusion of the plastic material occurs *before* the plastic material is applied to the workpiece. That is not the case. Claim 22 recites “the formed strand of plastic material (20) *being* fixedly joint with said edge (14).” (Emphasis added). The use of the word “being” taken in context of the rest of claim 22 implies that the plastic material is applied to the workpiece concurrently with its forming and hardening.

Therefore, to perform the method as the Examiner indicates would be to ignore the limitation of claim 22. Furthermore, the invention recited of group III must be produced by the apparatus recited in amended independent claim 1 (group I) because the only method that can produce such a product is the method recited in claim 12; and as argued above, the apparatus recited in amended independent claim 1 can perform no other method without forming the method recited in independent claim 12 (group II). Similarly as claims 2 – 11 depend from claim 1, they contain all of the limitations thereof, and can only produce a product having the limitations of that recited in claim 22. Therefore, Applicant respectfully requests the Examiner

to reconsider and withdraw the restriction requirement.

3. Groups II and III

Lastly, the Examiner argues that the invention of Group II is not the same invention as the invention of Group III. Claim 12 is the only independent claim of group II and recites a method for extruding a plastic material onto an edge of a workpiece in a “desired profile.” Claim 22, the only claim of group III recites a plate-like workpiece having a strand of plastic material extruded on an edge of a workpiece and having a “desired profile.”

The Examiner argues that these claims are drawn to different inventions because the product can be made by extruding the strip into a formed mold, removing it, heating it, and applying it to the workpiece. However, as argued above, the Examiner incorrectly asserts that claim 22 recites consecutive rather than concurrent actions. The workpiece of claim 22 is formed and hardened on an edge of a workpiece in one action as recited in claim 12. Therefore, the Examiner’s understanding of the claim is incorrect. Claims 12 and 22 both recite a strand of plastic material that is *formed on* an edge of a workpiece. The Examiner’s method of forming the plastic material in a mold is neither recited by claim 12 nor claim 22. As such, the invention of group III can only be produced by the method of group II. Similarly as claims 13 – 20 depend from claim 12, they contain all of the limitations thereof, and can only produce by the product recited in claim 22. Therefore, Applicant respectfully requests the Examiner to reconsider and withdraw the restriction requirement.

Priority

The Examiner stated that Applicant has not filed a certified copy of the South African

priority application as required by 35 U.S.C. 119(b).

Response

In the telephone interview of July 28, 2003, the Examiner indicated that the second priority paper had been found in the case.

Rejections Under 35 U.S.C. 112, Second Paragraph

The Examiner rejected claims 8 and 11 under 35 U.S.C. 112, second paragraph as being indefinite.

Response

By this Response and Amendment, claim 11 has been amended to replace the term “the” with “a,” which now provides proper antecedent basis for the phrase “transporting means.”

The Examiner states that claim 8 recites the phrase “in front of.” However, this phrase appears in claim 7 rather than in claim 8. Applicant therefore assumes that claim 7 is the subject of the Examiner’s rejection under 35 U.S.C. 112, second paragraph rather than claim 8. Claim 7 has been amended to claim that the application means are arranged – up stream – thereby more accurately reciting the location of the application means with respect to the plastic material application location. Applicant respectfully requests reconsideration and withdrawal of the Examiner’s rejection.

Objection to Claim 10

The Examiner objected to claim 10 as containing a multiple dependency.

Response

The multiple dependencies recited in claim 10 were deleted in a preliminary amendment

filed on November 6, 2001. In the interview summary dated July 28, the Examiner stated that the preliminary amendment changing the dependency of claim 10 had accidentally not been entered. Therefore, the Examiner's objection is moot in light of the previously filed amendment. Accordingly, Applicant requests reconsideration and withdrawal of the Examiner's objection.

Rejections under 35 U.S.C. 102(b) (Anticipation by Ecklund et al.)

The Examiner rejected claims 1, 2, 5, 8, and 11 under 35 U.S.C. 102(b) as being anticipated by U.S. patent no. 3,239,402 to Ecklund et al.

Response

Applicant has amended claim 1 of the present application, thereby obviating the Examiner's rejection. By this Response and Amendment, Applicant has amended claim 1 to recite a forming means comprising a rotatable roller having a circumferential profile. The circumferential profile is not taught by Ecklund et al. and, therefore, negates Ecklund et al. as an anticipatory reference.

Ecklund et al. disclose a device that employs pressure rollers to bond ribbon to a marginal edge of a workpiece. Ecklund et al.'s pressure rollers help to bond the ribbon to the sides of the workpiece and are not in contact with the edge of the workpiece; rather, they are in contact with a flat surface of the workpiece.

The forming means of the present application deforms the plastic material along the edge of the workpiece such that the plastic material has a shape similar to that of the workpiece edge. This is due to the fact that the contact surface of the forming means is shaped to conform to the edge of a workpiece. Also, the forming means has a moulding cavity that is defined by edges 30, 30, which aid in wrapping the plastic material around the sides of the workpiece. Therefore, in the present

invention, rollers need not be positioned along a flat surface of the workpiece because of the use of the forming means.

Such a forming means is not present in Ecklund et al. Therefore, Applicant respectfully requests the Examiner to reconsider and withdraw the rejection to claim 1. Similarly, since claims 2, 5, 8, and 11 depend from claim 1, they contain the limitations as recited therein. Therefore, Applicant respectfully requests the Examiner to reconsider and withdraw the rejections to claims 2, 5, 8, and 11.

Rejections under 35 U.S.C. 102(b) (Anticipation by Munro)

The Examiner rejected claims 1, 5, and 9 under 35 U.S.C. 102(b) as being anticipated by U.S. patent no. 4,597,821 to Munro.

Response

Applicant has amended claim 1 of the present application, thereby obviating the Examiner's rejection.

Munro teaches a hand-held trigger operated adhesive hot melt gun. Munro further teaches the use of pressure rollers that can aid in the application of the adhesive to a curved surface. These pressure rollers are positioned in groups of three. However, nowhere in the reference, does Munro teach that an individual pressure roller has a shape that conforms to the shape of the edge of the workpiece. Rather, the group of pressure rollers acts to shape the adhesive to the curved surface. The rollers themselves do not have curved surfaces.

In contrast, the forming means of the present application deforms the plastic material along the edge of the workpiece. The contact surface of the forming means is shaped to conform to the edge of a workpiece. Moreover, the present invention recites extruding a strand of *plastic material*,

while Munro teaches extrusion of an adhesive. Due to these differences, Munro is not anticipatory and Applicant respectfully requests the Examiner to reconsider and withdraw the rejection of claim 1. Similarly, since claims 5 and 9 depend from claim 1, they contain the limitations as recited therein. Therefore, Applicant respectfully requests the Examiner to reconsider and withdraw the rejection to claims 5 and 9.

Rejections under 35 U.S.C. 102(b) (Anticipation by Nakata et al.)

The Examiner rejected claims 1, 2, 5, and 7 under 35 U.S.C. 102(b) as being anticipated by U.S. patent no. 5,693,174 to Nakata et al.

Response

Applicant has amended claim 1 of the present application, thereby obviating the Examiner's rejection.

Nakata et al. teach a device comprising rolls that, as Nakata et al. describe in column 2, lines 35 to 40, may serve for forming the molding in a shape suitable for covering the edge of the article. However as is shown in Fig 18. of the Nakata patent, the rolls of the Nakata device mainly serve for further pressing the extruded strand to the edge of the workpiece, not for forming the strand to a desired shape.

In contrast, the present application discloses a forming means that deforms the plastic strip. The contact surface of the forming means is matingly shaped to conform to the edge of a workpiece thereby creating a "desired profile." Nakata et al. do not teach this feature; therefore, the Nakata et al. reference does not anticipate the present invention and Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claim 1. Similarly, since claims 2, 5, and 7

depend from claim 1, they contain the limitations as recited therein. Therefore, Applicant respectfully requests the Examiner to reconsider and withdraw the rejections to claims 2, 5, and 7.

Rejections under 35 U.S.C. 103(a) in view of Munro

The Examiner rejected claims 3 and 4 under 35 U.S.C. 103(a) as being unpatentable over U.S. patent no. 4,597,821 to Munro.

Response

The arguments above, with respect to anticipation by Munro are herein incorporated by reference.

The amendments to claim 1 obviate the Examiner's rejection because there is no showing that it would have been obvious to use a forming means having a contact surface that is shaped to conform to an edge of a workpiece as recited in amended claim 1. This feature is neither taught nor suggested by Munro. Moreover, the Examiner has not shown that it would have been obvious to use the device taught by Munro to apply a plastic material, as claimed in the present invention, rather than an adhesive.

Since claims 3 and 4 depend from claim 1, they contain all of the limitations therein. Munro does not teach or suggest all of the limitations disclosed in claim 1. As such, dependent claims 3 and 4 are patentable over Munro. Therefore, Applicant respectfully requests that the Examiner reconsider and withdraw the rejections of claims 3 and 4.

Rejections under 35 U.S.C. 103(a) in view of Munro in view of Dorus

The Examiner rejected claim 6 under 35 U.S.C. 103(a) as being unpatentable over U.S.

patent no. 4,597,821 to Munro in view of German published patent application no. DE 29817408
U1 to Dorus.

Response


Claim 6 has been canceled, thereby obviating the Examiner's rejection. Therefore, reconsideration and withdrawal of the rejection is respectfully requested.

CONCLUSION

In light of the foregoing, Applicant submits that the application is now in condition for allowance. If the Examiner believes the application is not in condition for allowance, Applicant respectfully requests that the Examiner contact the undersigned attorney if it is believed that such contact will expedite the prosecution of the application.

Respectfully submitted,
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